

## REMARKS

Applicants have submitted this Amendment and Response in reply to the Official Action date March 12, 2007 and Applicants believe that the Amendment and Response is fully responsive to the Official Action for at least the reasons set forth herein.

Applicants note that Claims 4, 5 and 7 have been amended herewith for clarification. Claim 4 has been amend to clarify that the first frequency is based on the number of pixels of the image pickup element. The claim is also amended to clarify that the first signal is a clock signal. Claim 7 has been amended to clarify that the first and second frequency is based upon the number of pixels of the image pickup element. The claim is also amended to clarify that the first and second signals are clock signals. Claim 7 has also been amended to differentiate between a first and second endoscope. Claim 5 has been amended to recite that the horizontal enlargement or reduction is based on a ratio between the first frequency and the second frequency. No new matter has been added to the application by way of the aforementioned amendments. For example, Applicants direct the Examiner's attention to pages 19-23 of the instant specification.

Applicants respectfully submit that Claims 4-9 are patentably distinct from the cited references. Applicant further submits that the unamended claims were patentable over the cited references and the amendments are being made solely for clarification.

Claims 4-9 have been rejected under 35 U.S.C. §103 (a) as being unpatentable over U.S. Patent No. 5,196,928 to Karasawa in view of U.S. Patent No. 5,255,092 to Loonen in further view of Takahashi et al., U.S. Patent 6,466,256.

The hypothetically combined references, whether taken alone or in any combination thereof fail to teach, suggest or render obvious each and every feature of the

claims. Specifically, none of the references teach that the frequency dividing circuit is provided in the endoscope. Additionally, none of the references teach that the first or second frequency is based on the number of pixels.

The inventors recognized that multiple different types of endoscopes having image pickup elements with different numbers of pixels could be attached. The inventors also recognized that image pickup elements cannot be accurately driven unless the elements are applied with a drive signal based upon the number of pixels. Therefore, the claimed invention includes the frequency dividing circuit in the endoscope. The clock signal is based on the number of pixels and is generated in the endoscope.

None of the references illustrate that the frequency dividing circuits are in the endoscope. In contrast, Karasawa teaches that the CCD is provided with a drive signal sent from a drive circuit 25a **in an image processing unit of a video processor**. See Col. 3., lines, 43-45. See also Col. 6 (“When a drive signal originating from a CCD drive circuit 25a in an image processing unit 25 is applied to the CCD 24b, image data is input ...”). Therefore, Karasawa does not teach the claimed configuration.

Loonen and Takahashi fail to cure this deficiency.

The Examiner asserts that the frequency dividing circuit is the frequency demultiplier 50 described in Takahashi. *Pro arguendo*, assuming that this is true, element 50 is clearly located **in the video processing device and not in the endoscope**. In fact, the frequency demultiplier 50 is part of the PLL timing generator 42. See Figure 7. The VCO circuit outputs a series of clock pulses having a given frequency, which is divided by the frequency demultiplier into a series of clock pulses. The series of divided clock pulses is input to the phase comparator.

Clearly, Takahashi does not teach that the frequency dividing circuits are in the endoscope, as claimed. In fact, Takahashi does not even depict a circuit structure for the endoscope.

All three prior art references will have the same problem as the conventional art, i.e., the problem that this invention is solving. There is simply no disclosure or suggestion of Applicants' invention. In particular, clock conversion is performed in the line memory so that only one type of clock signal processing need be performed within the camera control unit CCU. A single oscillator located in the CCU can control different types of CCDs. Therefore, the claimed invention is capable of performing the signal processing with one type of clock for a plurality of types of CCDs.

Additionally, none of the references suggest or teach the relationship between the frequency and number of pixels.

Therefore, Applicants submit that the hypothetical combination of the cited references fails to teach, suggest or render obvious, each and every limitation of independent Claims 4 and 7. Accordingly, independent Claims 4 and 7 are patentably distinct from the cited references.

Applicants submit that Claims 5, 6, 8 and 9 are patentable based upon their dependency from Claims 4 and 7, respectively, in view of at least the above-identified analysis.

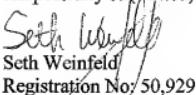
Additionally, Applicants submit that Claim 5 is separately patentable over the cited combination based upon the following additionally analysis. None of the references teach that the horizontal enlargement or reduction is based on a ratio between the first frequency and the second frequency, as recited. Specifically, none of the references teach

that the enlargement or reduction is based on the CCD drive frequency and the line memory reading frequency. Karasawa only suggests that enlargement can occur. See Col. 5, ;lines 1-8. However, the reference does not suggest the claimed basis.

For all the foregoing reasons, the Applicants respectfully request the Examiner to withdraw the rejection of Claims 4-9 pursuant to 35 U.S.C. § 103 (a).

In conclusion, the Applicants believe that the above-identified application is in condition for allowance and henceforth respectfully solicits the Examiner to allow the application. If the Examiner believes a telephone conference might expedite the allowance of this application, the Applicants respectfully request that the Examiner call the undersigned, Applicants' attorney, at the following telephone number: (516) 742-4343.

Respectfully submitted,

  
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